REMARKS

1. Specification

The Examiner has objected to the disclosure because it contains an embedded hyperlink and/or other form of browser executable code (see page 14, description of Figure 4). Applicant has amended the description on page 14 to delete the embedded hyperlink. Reconsideration and removal of the objection is respectfully requested.

2. Information Disclosure Statement

The Examiner has indicated that the references cited on pages 19-21 of the Specification, unless cited by the Examiner on form PTO-892, have not been considered. Applicant will separately submit an Information Disclosure Statement enclosing copies of each of these references so that they may formally be considered by the Examiner.

3. Claim Objections

The Examiner has objected to claims 1, 3, 5 and 20 for various informalities. Claim 1 has been objected to because the word "probe" was misspelled. Claim 3 was objected to because the word "or" should have appeared before the phrase "via a protein-protein interaction". Claim 5 was objected to because "Gene 32" should be "Gene32 protein". And, claim 20 was objected to because step (c) in step (e) should have been step (d). Applicant has made most of the corrections suggested by the Examiner. Applicant amended claim 3 to correct a misspelled word but did not insert the word "or" before the phrase "via a protein-protein interaction" because Applicant did not believe that amendment was necessary. Claim 3 lists four different means of coating the surface of the support with a silicate or silane: via (1) a protein-substrate interaction, (2) a protein-protein interaction, (3) a protein-nucleic acid interaction or via (4) an interaction of two hydrophobic building blocks. Applicant believes the claim, as currently written, properly

reflects these possibilities and therefore has not amended the claim in the manner suggested by the Examiner. Reconsideration and removal of the objections is respectfully requested.

4. Rejections under 35 U.S.C. §112, second paragraph

Claims 1-10, 14-17, 19 and 20 have been rejected under 35 U.S.C. §112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner has rejected claims 1 and 19 because it is unclear how step (e) of the claims are related to steps (c) and (d). A similar rejection was applied to claim 20. Applicant has amended the claims to clarify the relationship. Claim 14 was rejected because the phrase "randomized nucleotides" lacked proper antecedent basis. Applicant has amended the claim to obviate the rejection. Claim 18 has been rejected because the phrase "a probe support which has been pretreated and thus allows for the attachment of target DNAs and/or target DNA that have already been attached" is vague. The Examiner argues that, from this phrase, it is unclear whether target DNAs are on a probe support or not. Claim 18 encompasses both target DNAs that have already been attached to the probe support and a probe support which has been pretreated, but not yet brought into contact with target DNAs. Applicant has amended the claim language to make this clear. Applicant believes that the foregoing amendments have overcome all of the indefiniteness rejections and reconsideration and removal thereof is respectfully requested.

5. Rejections under 35 U.S.C. §102 and 35 U.S.C. §103

The Examiner has rejected claims 1-3, 6-10, 16-17 and 19-20 under 35 U.S.C. §102(e) as being anticipated by Ness et al. (U.S. Patent No. 6,613,508 filed on July 22, 1997). The Examiner's detailed comments with respect to the Ness reference and its application to the claims are set forth on pages 5-10 of the Office Action and are not reproduced herein. The Examiner has also rejected claims 4, 5 and 18 as being unpatentable under 35 U.S.C. §103(a) over Ness in view of Shuber, Cros and/or the Strategene catalog. Briefly, Ness is cited for teaching methods and compositions for analyzing nucleic acid molecules utilizing sizing techniques. The

Examiner argues that Ness teaches combining tagged nucleic acid molecules with a selected target molecule under conditions and for a time sufficient to permit hybridization of the tagged molecules to the target molecule and separating the tagged nucleic acid molecules by sequential length. The Examiner further argues that the tagged nucleic acid molecules taught by Ness are with different mass and, consequently, Ness discloses hybridization of nucleic acid molecules to a set of probes of different nucleobase sequences, wherein each probe has a mass that differs from one of all the other probes as recited in step (a) of claim 1, the separation of non-hybridized probes and the detachment of the hybridized probes as recited in steps (b) and (c) and the analysis of the probe in step (d). The Examiner presents additional arguments applying the teachings of Ness or Ness in conjunction with the secondary references to anticipate or render the remaining claims obvious. Applicant respectfully traverses.

Applicant submits that the present invention is novel and non-obvious over the prior art cited by the Examiner. The main claim of the present invention relates to a method wherein the probes being used each have a distinct individual mass. This novel feature is not disclosed or suggested by the Ness reference. The Ness reference relates to nucleic acid molecules which throughout the process carry tags and wherein the method always comprises the steps of cleaving the tags from the probes and subsequently detecting the tags (see, col. 2, lines 46-47 and 62-63; col. 54, lines 46-47; col. 4, lines 41-47 and col. 6). Thus, it would be evident to the skilled artisan that the cleavage of the tags from the probes and the detection of the tags (as opposed to the probes) is a key feature of the Ness invention. Applicant recognizes that dependent claims 6 and 8 further specify that the probes carry a tag. However, there is no disclosure, suggestion or teaching in the Ness reference to exclude or eliminate the step of cleaving the tags from the probes, nor of the complete omission of the tags. On the other hand, the skilled artisan, after reading the present Specification, would conclude that the method according to the present invention does not extend to the mass spectrometrical analysis of tags, but instead relates to the mass spectrometrical analysis of nucleic acids the probes according to the invention consist of. See step (d) of claim 1 and page 5 of the Specification). This is also abundantly clear from Example 1 and Figure 1. Comparing the mass distributions of the probes in part 1 and part 3 of Figure 1, the skilled artisan would recognize that the masses of the hybridizing probes P2, P6, P7, P9 and P14 do not differ from the masses of the subsequently detected species. In other

words, the hybridizing probes and the substances subjected to mass spectrometrical analysis are identical. This is simply not taught or suggested by Ness. The secondary references fails to remedy the deficiencies of Ness. None of the cited prior art references, either singly or in combination, disclose or suggest the present invention. Accordingly, Applicant submits that the present claims are directed to patentable subject matter.

Favorable consideration and early allowance of the claims is requested.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Leonard R. Svensson (Reg. No. 30,330) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. § 1.17 and 1.136(a), Applicant hereby petition for an extension of one (1) month to August 5, 2004 for the period in which to file a response to the Office Action dated April 5, 2004.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

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I hereby Certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office:
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Respectfully submitted,
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